



Suspended, Cancelled, And Restricted Pesticides



Suspended, Cancelled, and Restricted Pesticides List

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Alar	See Daminozide
Aldrin ✓	Hexachlorohexahydro-endo, exo-dimethanonaphthalene 95 percent, and related compounds 5 percent (CAS No. 309-00-2)
Amitraz	N'-(2,4-Dimethylphenyl)-N-[(2,4-dimethylphenyl) imino] methyl] N-methyl-methaneimidamide (CAS No. 33089-61-1)
Arsenic Trioxide	Arseneous oxide (CAS No. 1327-53-3)
Benomyl	Methyl 1-(butylcarbamoyl)-2-benzimidazolecarbamate (CAS No. 17804-35-2)
BHC ✓	Benzene hexachloride, other isomer of (CAS No. 608-73-1)
Bithionol	2,2'-Thiobis(4,6-dichlorophenol) (CAS No. 97-18-7)
Bromoxynil	Benzonitrile, 3,4-dibromo-4-hydroxy (CAS No. 1689-84-5)
Bromoxynil Butyrate	(CAS No. 3861-41-4)
Cadmium	(CAS No. 7440-43-9)
Calcium Arsenate	See Wood Preservatives
Captafol	Cis-N-((1,1,2,2-tetrachloroethyl)thio)-4-cyclohexene-1,2-dicarboximide (CAS No. 2939-80-2)
Captan	N-Trichloromethylthio-4-cyclohexene-1,2-dicarboximide (CAS No. 133-06-2)
Carbon Tetrachloride	(CAS No. 56-23-5)
Chloranil	Tetrachloro-p-benzoquinone (CAS No. 116-29-0)
Chlordane ✓	Octachloro-4,7-methanotetrahydroindane (CAS No. 57-74-9)

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Chlordimeform	N,N-Dimethylformamidine, N'-(4-chloro-o-tolyl) (CAS No. 6164-98-3)
Chlorobenzilate	Ethyl 4,4'-dichlorobenzilate (CAS No. 510-15-6)
Copper Arsenate	(CAS No. 10103-61-4)
Creosote	See Wood Preservatives
Cyanazine	Propaneitrile, 2-((4-chloro-6-(ethylamino) 1,3,5-triazin-2-yl)-1-amino)-2-methyl (CAS No. 21725-46-2)
Cyhexatin	Tricyclohexylhydroxystannane (CAS No. 13121-70-5)
Daminozide	Butanedioic acid, mono(2,2-dimethylhydrazide) (9CI) (CAS No. 1596-84-5)
DBCP	1,2-Dibromo-3-chloropropane (CAS No. 96-12-8)
DDD (TDE) ✓	Dichloro diphenyl dichloroethane (CAS No. 72-54-8)
DDT ✓	Dichloro diphenyl trichloroethane (CAS No. 50-29-3)
2,4-D	2,4-Dichlorophenoxyacetic acid (CAS No. 94-75-7)
Diallate	S-(2,3-Dichloroallyl) diisopropylthiocarbamate (CAS No. 2303-16-4)
Dicofol	Benzenemethanol, 4-chloro-, alpha, -(4-chlorophenyl)-, alpha, -(trichloromethyl) (CAS No. 115-32-2)
Dieldrin ✓	See Aldrin
Dimethoate	O,O-Dimethyl S-((methylcarbamoyl)methyl) phosphorodithioate (CAS No. 60-51-5)
Dinocap	Dinitro (1-methylheptyl)phenyl crotonate (CAS No. 39300-45-3)
Dinoseb	Phenol, 2-(1-methylpropyl)-4,6-dinitro (CAS No. 4097-36-3)
Disinfectants	
EBDCs	Ethylene bithiocarbamates
EDB	Ethylene dibromide (CAS No. 106-93-4)

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Electromagnetic Pest
Control Devices

Electronic Mosquito
Repelling Devices

Endrin ✓

Hexachloroepoxyoctahydro-endo-demethanonaphthalene
(CAS No. 72-20-8)

EPN

O-Ethyl O-(p-nitrophenyl)phenylphosphonothioate (CAS
No. 2104-64-5)

Fluoroacetamide

1081 (CAS No. 640-19-7)

Heptachlor ✓

See Chlordane

Kepone

Decachlorooctahydro-1,3,4-metheno-2H-
cyclobuta[cd]pentalen-2-one (CAS No. 143-50-0)

Lead Arsenate

(CAS No. 7784-40-9) See Wood Preservatives

Lindane ✓

1,2,3,4,5,6-Hexachlorocyclohexane, gamma isomer of
benzene hexachloride (CAS No. 58-89-9)

Mercury

(CAS No. 7439-97-6)

Metaldehyde

2,4,6,8-Tetramethyl-1,3,5,7-tetroxane (CAS No. 108-62-
3)

Mirex

Dodecachlorooctahydro-1,3,4-methano-1HCyclobuta[cd]
pentalene (CAS No. 2385-85-5)

Monocrotophos

3-(dimethoxyphosphinyloxy-N-methyl-cis-crotonamide
(CAS No. 6923-22-4)

OMPA

Octamethylpyrophosphoramide (CAS No. 152-16-9)

10,10'-
Oxybisphenoxarsine

(CAS No. 58-36-6)

Oxyfluorfen

2-Chloro-1(e-ethoxy-4-nitrophenoxy)-4-
(trifluoromethyl)benzene (CAS No. 42874-03-3)

Parathion

O-Ethyl O-(p-nitrophenyl)phenylphosphonothioate (CAS
No. 56-38-2)

PCNB

Pentachloronitrobenzene (CAS No. 82-68-8)

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Pentachlorophenol	(CAS No. 87-86-5) See Wood Preservatives
Phenarsazine Chloride	(CAS No. 578-94-9)
PCBs	Polychlorinated biphenyls
Polychlorinated Terphenyls	Arochlor
Pronamide	N-(1,1-Dimethylpropynyl) 3,5-dichlorobenzamide (CAS No. 23950-58-5)
Quaternary Ammonium Compounds	
Safrole	4-Allyl-1,2-(methylenedioxy)benzene (CAS No. 94-59-7)
Seed Treatments	
Silvex	2-(2,4,5-Trichlorophenoxy) propionic acid (CAS No. 93-72-1)
Sodium Arsenate	(CAS No. 13464-38-5) See Wood Preservatives
Sodium Arsenite	(CAS No. 7784-46-5) See Wood Preservatives
Sodium Cyanide	(CAS No. 143-339)
Sodium Fluoride	(CAS No. 7681-49-4)
Sodium Monofluoroacetate	Compound 1080 (CAS No. 62-74-8)
Strobane	Terpene polychlorinates (65% or 66% chlorine) consists of chlorinated camphene, pinene, and related polychlorinates (CAS No. 8001-50-1)
Strychnine	(CAS No. 57-24-9)
2,4,5-T	See Silvex
2,4,5-TCP	Phenol, 2,4,5,-trichloro-(8Cl)(9Cl)
Thallium Sulfate	(CAS No. 7446-18-6)
TOK	2,4,-Dichlorophenyl p-nitrophenyl ether (CAS No. 1836-75-5)

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Toxaphene	Technical Chlorinated Camphene (67-69% chlorine) (CAS No. 8001-35-2)
Tributyltin	Distannoxane, hexabutyl (CAS No. 56-35-9)
Trifluralin	a,a,a-Trifluoro-2,6-dinitro-N,N-dipropyl-p-toluidine (CAS No. 1582-09-8)
Vinyl Chloride	Chloroethylene (CAS No. 75-01-4)
Wood Preservatives (Calcium Arsenate)	
Wood Preservatives (Creosote)	
Wood Preservatives (Phenol, pentachloro- (8Cl)(9Cl))	
Wood Preservatives (Sodium Arsenate)	
Wood Preservatives (Sodium Arsenite)	

Suspended, Cancelled, and Restricted (SCR) Pesticides

Prepared by the Office of Compliance Monitoring,
Office of Pesticides and Toxic Substances,
U.S. Environmental Protection Agency (EPA)

This booklet has been compiled for the purpose of summarizing and clarifying actions taken by EPA for pesticides that the Agency has suspended, cancelled, or otherwise restricted because of concern for potentially adverse effects.*

The following have been *excluded* from this booklet:

- a) Pesticide registrations that have been cancelled for failure to pay the annual registration maintenance fee required by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended in 1988;
- b) Cancellations on pesticide use patterns that were cancelled by Pesticide Regulation Notices based on "residue," "no residues," and "zero tolerances";
- c) Pesticides that have been cancelled by some, but not all, registrants; and
- d) Pesticides that have been suspended as the result of Stop, Sale, Use, or Removal Orders as defined under Section 3(C)(2)(B) of FIFRA.

This listing identifies the current status and references the regulatory history of each pesticide, as well as the criteria of concern for which the chemical was reviewed by the Agency. This booklet was designed to provide EPA inspectors with a quick reference guide, as well as to provide other government agencies, both domestic and foreign, with current information on these pesticides. This guide should also prove useful to anyone interested in pesticides or involved in pesticide regulatory work.

This publication was compiled in conjunction with technical, legal, and scientific divisions within the Office of Pesticides and Toxic Substances. It represents the fifth edition of the Suspended, Cancelled, and Restricted Pesticides booklet and replaces the previous edition published in January 1985. The material in this edition was compiled as of February 1990. Future Agency actions will necessitate updating this publication, and inserts will be published periodically.

* The term *restricted* applies to pesticide uses that have been limited, revised, or restricted to comply with specific label changes mandated by the Agency and does not include all restricted-use pesticides, which require application by or under the direct supervision of a certified applicator as defined under Section 3(d) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). To obtain a separate list of these restricted-use pesticides, please contact the EPA Registration Support Branch, Registration Division, Office of Pesticide Programs (703) 557-7700.

Comments on the accuracy and completeness of this list should be addressed to:

Office of Compliance Monitoring (EN-342)
Office of Pesticides and Toxic Substances
Environmental Protection Agency
Washington, D.C. 20460

ALDRIN

Criteria of Concern	Carcinogenicity Bioaccumulation Hazard to wildlife Other chronic effects
Action/Use Affected	Cancelled, all products.
Reference	PR Notice 71-4 March 18, 1971; Accelerated Decision by the Chief Administrative Law Judge May 27, 1975; Order declining Review of the Accelerated Decision of the Administrative Law Judge issued by the Chief Judicial Officer June 30, 1975; 37 FR 37246 October 18, 1974. Letter to EPA from the Manufacturer requesting voluntary cancellation of termiticide uses, May 15, 1987.

BHC

Criteria of Concern

Oncogenicity

Action/Use Affected

Voluntary cancellation, all products.

Existing Stocks Provisions

The sale, distribution, shipment, and use of existing stocks of BHC nongamma isomers is prohibited in the U.S.

Reference

43 FR 31432 July 21, 1978.

CHLORDANE

Criteria of Concern

Oncogenicity

Action/Use Affected

Voluntary cancellation of all chlordane/heptachlor products by the registrant, Velsicol. All other chlordane/heptachlor products are either voluntarily cancelled, or suspended for failure to meet EPA data requirements.

The only commercial use of chlordane/heptachlor products still permitted is for fire ant control in power transformers.

Existing Stocks Provisions

- 1.) The sale, distribution, and shipment of existing stocks of all cancelled chlordane/heptachlor products is prohibited in the U.S. as of April 15, 1988.
- 2.) Commercial use of existing stocks of these products is also prohibited, except for fire ant control in power transformers.
- 3.) Use of existing stocks of termiticide products in the possession of homeowners is also permitted.

Reference

PR Notice 74-11 December 2, 1974; 41 FR 7552 February 19, 1976; FIFRA Docket No. 336 et al. March 6, 1978; PR Notice 78-2 March 28, 1978; ruling of D.C. Judge February 23, 1988; 53 FR 11798 April 8, 1988; 54 FR 20194 May 10, 1989.

DDD (TDE)

Criteria of Concern

Carcinogenicity
Bioaccumulation
Hazard to wildlife and other chronic effects

Action/Use Affected

Cancelled, all products containing DDD, a metabolite of DDT.

Reference

PR Notice 71-5 March 18, 1971.

DDT

Criteria of Concern	Carcinogenicity Bioaccumulation Hazard to wildlife and other chronic effects
Action/Use Affected	Cancelled, all products.
Reference	PR Notice 71-1 January 15, 1971; 37 FR 13369 July 7, 1972.

DIELDRIN

See Aldrin.

Reference

PR Notice 71-4 March 18, 1971. Accelerated decision by the Chief Administrative Law Judge May 27, 1975. Order declining review of the accelerated decision of the Administrative Law Judge issued by the Chief Judicial Officer June 30, 1975. 37 FR 37246 October 18, 1974.

ENDRIN

Criteria of Concern	Oncogenicity Teratogenicity Reduction in endangered and nontarget species
Action/Use Affected	Voluntary cancellation, all products.
Reference	Unnumbered PR Notice May 20, 1964; 44 FR 43632 July 25, 1979; 49 FR 42792 October 24, 1984; voluntary cancellations 1984-85.

LINDANE

Criteria of Concern

Oncogenicity
Teratogenicity
Reproductive effects
Other chronic effects
Acute toxicity

Action/Use Affected

Cancellation of lindane products for use in vaporizers.

Cancellation of lindane products used for direct application to aquatic environments.

In order to avoid cancellation, registrants of lindane products for all other uses must make the following amendments to their registration:

1.) Commercial Ornamentals, Avocados, Pecans, Livestock Sprays, Forestry, Christmas Trees, Structural Treatments, Dog Shampoos, and Dog Dusts

- a.) These products must be classified for restricted use, and their labels must include the following statements:

Restricted Use Pesticide.

For application only by or under the direct supervision of a certified applicator.

- b.) Products for the above uses (except dog shampoos) must also include the following labeling statement:

Applicators must wear the following protective clothing during the application process: a light-weight protective suit or coveralls; water-resistant hat; unlined, waterproof gloves; and unlined, light-weight boots. Mixers and loaders must also wear goggles or face shield, waterproof gloves, and a waterproof apron.

2.) Additional Requirements for Dog Dust Use

Labels of lindane products for dog dust use must include the following statement:

This product should be applied in a well-ventilated area.

3.) Additional Requirements for Structural Treatment

Labels of lindane products for structural treatment use must contain the following statement:

Applicators working in enclosed areas, such as crawl spaces must wear a respirator approved by OSHA. (29 CFR 1910.134)

4.) Protective Clothing Requirements for Dog Shampoos

Applicators of lindane-containing dog shampoos must wear waterproof, elbow-length gloves; a waterproof apron; and unlined, waterproof boots.

5.) Homeowner Ornamentals

Lindane products for use on homeowner ornamentals must include the following labeling statement:

Applicators must wear the following protective clothing during the application process: long-sleeved shirt, long pants, waterproof gloves, full foot covering, and a head covering.

6.) Hardwood Logs and Lumber

Lindane-containing products for use on hardwood logs must include the following labeling statement:

Applicators must wear the following protective clothing during the application process: light-weight protective suit or coveralls, unlined waterproof gloves, and unlined, lightweight boots.

LINDANE

7.) Dog Dips

Lindane products for use in dog dips must be labeled as follows*:

- a.) The following statement must appear on the product label beneath the *Mix as Directed* statement under *Caution*:

AN INDIVIDUAL APPLICATOR
MUST NOT APPLY THIS
PRODUCT MORE THAN TWELVE
TIMES PER YEAR.

- b.) The following statement shall be located on the front panel of the label, beneath the product name and in the same size type as the signal word:

FOR KENNEL, COMMERCIAL,
FARM, AND SPORT DOG USES
ONLY.

- c.) The last two sentences under *Directions for Use* shall state the following:

An individual applicator must not
use this product more than
twelve times per year. Each
treatment of three dogs or fewer
should be considered one use.

- d.) Applicators must wear the following protective clothing during the treatment process: elbow-length, waterproof gloves; a waterproof apron; and unlined, waterproof boots.
- e.) The label shall state that "improper dilution could cause serious injury to your dog."
- f.) The label shall state that children under the age of 13 should not be allowed to handle or apply this product.

* One registrant contested the initial cancellation of all lindane dog dip products to control pests other than mites. Consequently, on June 27, 1984, the Agency agreed to continue registration of lindane dog dips to control fleas, ticks, lice, sarcoptic mange, and scabies provided certain additional protective measures were instituted.

LINDANE

- g.) The label shall be revised in accordance with the provisions of the Notice of Intent to Cancel dated September 30, 1983, regarding disposal of dips.

8.) Moth Sprays

Lindane products for use in moth sprays must include the following label statements:

Applicators must wear MSHA/OSHA approved cartridge respirators when applying this product.

9.) Seed Treatment

Lindane-containing products for use in seed treatments must be labeled as follows:

Applicators who apply this product manually or without the use of a closed-system treatment procedure must wear the following protective clothing during the application process: long-sleeved shirt, long pants, gloves, and a disposable, paper dust mask that covers at least one-third of the face.

This product should be applied in a well-ventilated area.

Protective clothing for automated or closed-system treatment is not required.

10.) Other Household Uses (Flea Collars, Shelf Paper, and Household Sprays)

Lindane products for these uses must be labeled with the following warnings:

Do not allow children to handle or apply this product.

Children and pets should not be allowed in treated areas until spray surfaces are dry.

11.) Smoke Fumigation

Lindane smoke fumigation products for outdoor use must include the following label statement:

LINDANE

Not for indoor use.

Labels for all lindane products must be modified to meet the standards of 40 CFR 156.10. Labels must describe symptoms and proper practical treatment for poisoning, proper handling and disposal, and warnings appropriate for the product's toxicity category. Where applicable, labels must include the following statement:

Aerial application of lindane is prohibited.

Lindane products for residential use that contain more than 6.5 percent active ingredient must comply with the child-resistant packaging regulations described in 40 CFR 157, Subpart B.

12.) Disposal of Dips

Lindane products for dip uses (other than household uses) must be labeled with the following provisions:

Used dip solutions must be disposed of in accordance with the Resource Conservation and Recovery Act (RCRA). If the applicator generates more than 1,000 kg used dip solution in combination with other hazardous waste, the material must be treated as a hazardous waste subject to Subpart C of RCRA. Any user who wishes to treat, store, or dispose of hazardous waste must obtain a permit to serve as a hazardous waste facility pursuant to RCRA.

Existing Stocks Provisions

- 1.) The use of existing stocks of lindane products by end users is permitted until the supply is exhausted.
- 2.) Any existing stocks of products within the possession of the registrant and within the possession of distributors other than the registrant, including retailers, must be disposed of in accordance with the Resource Conservation and Recovery Act.

LINDANE

Reference

PR Notice 69-9 April 28, 1969; IF&R Docket No. 19
December 2, 1974; 48 FR 48512 October 19, 1983; 49
FR 26282 June 27, 1984; 50 FR 5424 February 8, 1985.
Illinois District Court Memorandum Opinion and Order
February 9, 1987.

ALAR

See Daminozide.

Reference

54 FR 47492 November 14, 1989.

AMITRAZ

Criteria of Concern

Oncogenicity

Action/Use Affected

All products containing amitraz as a sole active ingredient may continue to be registered for sale, distribution, reformulation, and use on pears, and on pears used as feed for cattle and hogs, subject to the terms and conditions specified in the EPA publication "Guidance for the Reregistration of Pesticide Products Containing Amitraz as the Active Ingredient." Registrants must provide, or agree to develop, additional data, specified in the aforementioned publication in order to maintain existing registrations or to permit new registrations.

In order to avoid cancellation, registrants must make the following labeling amendments:

- 1.) The following revised environmental hazard statement must appear on all manufacturing-use product labels:

This pesticide is toxic to fish. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or public water unless this is specifically identified in an NPDES permit. Do not discharge effluent containing this product into sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of EPA.

- 2.) The reentry statement below must appear in the use directions of labels with the directions for use on pears:

Do not reenter treated areas for 24 hours without protective clothing.

- 3.) The worker protection statements listed below must appear as part of the precautionary statements for all end-use amitraz products:

During mixing/loading or application, wear a protective suit which has long sleeves and long pants. Wear chemical resistant gloves, a hat, boots, and goggles or face shield. A helmet with visor may be substituted for the hat and goggles during aerial application. Mixer/loaders should also wear a chemical resistant apron when handling the concentrated product. Wash thoroughly with

soap and water after handling and before eating, urinating, or smoking. Remove and wash clothing before reuse. Clothing should be laundered separately from household articles. Replace gloves frequently. Clothing which has been drenched and used gloves should be disposed of in accordance with state and local regulations. Instead of clothing specified above, the applicator can use an enclosed tractor cab or cockpit with properly filtered air supply.

- 4.) The following environmental hazards statement listed below must appear on the end-use label in the Environmental Hazards section:

This product is toxic to fish. Do not apply directly to water. Drift and runoff from treated areas may be hazardous to fish in adjacent sites. Do not contaminate water by cleaning of equipment or disposal of wastes.

Reference

44 FR 32736 June 7, 1979; 44 FR 59938 October 17, 1979. EPA Document: Guidance for the Reregistration of Pesticide Products Containing Amitraz as the Active Ingredient, October 1987.

ARSENIC TRIOXIDE

See Wood Preservatives, nonwood uses.

Reference

PR Notice 67-2 August 1, 1967; Interpretation No. 25 August 1968; 53 FR 5524 February 24, 1988; 53 FR 24787 June 30, 1988.

BENOMYL

Criteria of Concern	Reduction in nontarget organisms Mutagenicity Teratogenicity Reproductive effects Hazard to wildlife
Action/Use Affected	In order to avoid cancellation of benomyl products for aerial application uses, registrants with products packaged in 5-pound or larger containers must include the following labeling statement: Harmful if inhaled. Wear a cloth or disposable paper dust mask during handling and mixing.
Reference	47 FR 46747 October 20, 1982.

BITHIONOL

Action/Use Affected

Cancelled, products intended for:

1. Direct contact with the skin or expected direct or continuous contact with the skin.
2. Use in textiles or other materials likely to come in contact with the skin.
3. Household use.

Reference

PR Notice 68-13 August 14, 1968.

BROMOXYNIL

Criteria of Concern

Mutagenicity

Action/Use Affected

In order to avoid cancellation, the sole registrant, Rhone-Poulenc, was required to amend the registrations for its two bromoxynil products, buctril and bronate. These products can no longer be used for turf and noncrop areas.

These amendments include adding warning statements to the product labels stating that exposure during pregnancy causes birth defects in laboratory animals, restricting its use to certified applicators, and requiring additional protective clothing for mixers, loaders, and applicators.

Rhone-Poulenc is also required to conduct an extensive notification and educational program for bromoxynil users to inform them of the potential birth defect risks for mixing, loading, and applying bromoxynil, as well as the importance of following the new risk reduction measures.

Rhone-Poulenc was also required to adhere to the following shipment provisions:

- 1.) By May 6, 1989, the registrant was required to halt shipment of all bromoxynil products until approved amended stickers are affixed to each container within the company's possession.
- 2.) By May 15, 1989, the registrant was required to provide each distributor holding inventory of bromoxynil products sufficient stickers for such inventory.
- 3.) By May 25, 1989, the registrant was required to provide each reseller and retailer holding inventory of bromoxynil products sufficient stickers for such inventory.
- 4.) The registrant was also required to provide each distributor, reseller, and retailer with instructions concerning the manner in which the sticker must be affixed to each container, and to implement the attached labeling communication plan by the dates described therein.

BROMOXYNIL

- 5.) The registrant is also required to assume responsibility for ensuring that each distributor, reseller, or retailer attaches the sticker to each container that is sold or distributed by the distributor, reseller, or retailer after the date the stickers are received.
- 6.) After October 1, 1989, the registrant was required to ensure that all bulk containers released for shipment include a mechanical transfer mechanism which terminates in a drip-free hard coupling that may be used only with a spray or mix tank that has been fitted with a compatible coupling.
- 7.) By October 1, 1989, the registrant was required to establish a program to provide assistance to users who do not own a mechanical transfer system which terminates in a drop-free hard coupling and who wish to obtain such a system or to modify their present system.

Existing Stocks Provisions

The shipment of bromoxynil products by the registrant that do not include the amended labeling and restrictions listed above was prohibited in the U.S. as of October 1, 1989.

Reference

54 FR 24949 June 12, 1989.

BROMOXYNIL BUTYRATE

Criteria of Concern

Mutagenicity

Action/Use Affected

Voluntary cancellation, all products.

Existing Stocks Provisions

The sale, distribution, shipment, and use of existing stocks by bromoxynil butyrate is prohibited in the U.S. as of June 13, 1989.

Reference

54 FR 24950 June 12, 1989.

CADMIUM

Criteria of Concern

Oncogenicity
Mutagenicity
Teratogenicity
Fetotoxicity

Action/Use Affected

Cancellation and denial of registrations of products that contain cadmium for use on golf course fairways and home lawns.

In order to avoid cancellations of cadmium products labeled for use on golf course greens and tees, registrants must make the label modifications specified below:

RESTRICTED USE PESTICIDE for retail sale to and use only by certified applicators or persons under the direct supervision of a certified applicator and only for those uses covered by the certified applicators' certification.

Cadmium has been shown to produce kidney toxicity in humans, and tumors in laboratory animals.

This product is only to be applied by power boom spraying equipment to golf course greens and tee areas only. Do not apply through portable, manned, or hand-held pump sprayers.

Wear chemical resistant gloves, long-sleeved shirts, and long-legged pants. In addition, wear a chemical resistant apron during mixing and loading.

Wash gloves with soap and water before removing. Launder all clothing worn during use before reusing and launder separately from household articles.

Existing Stocks Provisions

- 1.) No manufacturer may release for shipment after January 31, 1988, existing stocks of any cadmium product unless the product bears the required amended label.
- 2.) The sale or distribution of any cadmium product by a retailer or other person was prohibited after April 30, 1988, unless the product bears the required amended label.

Reference

52 FR 31076 August 19, 1987.

CALCIUM ARSENATE

See Wood Preservatives, non-wood uses.

Reference

53 FR 5524 February 24, 1988; 53 FR 24787 June 30, 1988.

CAPTAFOL

Criteria of Concern	Oncogenicity Acute and chronic wildlife effects
Action/Use Affected	Voluntary cancellation, all products.

Existing Stocks Provisions

The sale, distribution, shipment, and use of existing stocks of captafol products is prohibited in the U.S.

Reference	52 FR 27576 July 22, 1987; 51 FR 11341 April 2, 1986.
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CAPTAN

Criteria of Concern	Oncogenicity
Action/Use Affected	<p>Cancellation and denial of registrations for products containing captan as an active ingredient, except for the following uses*:</p> <ol style="list-style-type: none">1.) All nonfood uses, including technical captan.2.) Seed treatments.3.) The following food uses: Almonds, apples (pre- and post-harvest), apricots, blackberries, blueberries, celery (plant-bed), cherries (pre- and post-harvest), dewberries, eggplant (plant-bed), grapes, green onions, lettuce, mangoes, nectarines, peaches, pears (post-harvest only), peppers (plant-bed), pimentos (plant-bed), plums/prunes, raspberries, spinach (plant-bed), strawberries, taro, tomatoes (plant-bed). <p>All captan uses other than those listed above are cancelled.</p>
	<p style="text-align: center;"><u>Existing Stocks Provisions</u></p> <p>The sale, distribution, shipment, and use of existing stocks of cancelled captan products is prohibited in the U.S. after February 24, 1990.</p>
Reference	54 FR 8116 February 24, 1989.

* Captan is still being reviewed by EPA. Current requirements and restrictions are available from the EPA Registration Division.

CARBON TETRACHLORIDE

Criteria of Concern	Oncogenicity Toxic effect on liver and kidneys
Action/Use Affected	Cancelled, all products.
Reference	51 FR 4104 November 12, 1986. FIFRA Sec. 3 registration cancelled for nonpayment of 1989 maintenance fee, October 12, 1989.

CHLORANIL

Criteria of Concern	Oncogenicity
Action/Use Affected	Voluntary cancellation, all products.
Reference	42 FR 3702 January 19, 1977.

CHLORDIMEFORM

Criteria of Concern

Oncogenicity

Action/Use Affected

Cancelled, all products.

Existing Stocks Provisions

- 1.) The sale and distribution of existing stocks of chlordimeform in the possession of registrants, retailers, and distributors was prohibited after February 19, 1989.
- 2.) The use of existing stocks of chlordimeform in the possession of end users was prohibited after October 1, 1989.
- 3.) Registrants are required to recall those stocks that are in the hands of retailers and distributors.

Reference

53 FR 36422 September 19, 1988; 54 FR 6242 February 8, 1989.

CHLOROBENZILATE

Criteria of Concern

Oncogenicity
Testicular effects

Action/Use Affected

Cancellation and denial of registrations of chlorobenzilate products for uses other than citrus in Florida, Texas, California, and Arizona.

In order to avoid cancellation for citrus uses in these four states, registrants must make the following labeling modifications:

1.) Restricted Use Pesticides

For retail sale to and use only by certified applicators or persons under their direct supervision and only for those uses covered by the certified applicator's certification.

2.) General Precautions

Take special care to avoid getting chlorobenzilate in eyes, on skin, or on clothing.

Avoid breathing in vapors or spray mist.

In case of contact with skin, wash as soon as possible with soap and plenty of water.

If chlorobenzilate gets on clothing, remove contaminated clothing and wash affected parts of body with soap and water. If the extent of the contamination is unknown, bathe entire body thoroughly. Change to clean clothing.

Wash hands with soap and water each time before eating, drinking, or smoking.

At the end of the workday, bathe entire body with soap and plenty of water.

Wear clean clothes each day and launder before reusing.

3.) Required Clothing and Equipment for Application

One-piece overalls that have long sleeves and long pants constructed of finely woven fabric as specified in the USDA/EPA Guide for Commercial Applicators.

Wide-brimmed hat.

Heavy duty fabric work gloves.

CHLOROBENZILATE

Any article of clothing that has been worn while applying chlorobenzilate must be cleaned before reusing. Clothing that has been drenched or has otherwise absorbed concentrated pesticide must be buried or burned.

Face piece respirator of the type approved for pesticide spray applications by the National Institute for Occupational Safety and Health.

Instead of the equipment and clothing specified above, the applicator can use an enclosed tractor cab that provides a filtered air supply. Aerial application may be conducted without the specified clothing and equipment.

4.) Handling Precautions

Heavy duty rubber or neoprene gloves and apron must be worn during loading, unloading, and equipment clean up.

Reference

44 FR 9548 February 13, 1979.

COPPER ARSENATE (BASIC)

Criteria of Concern	Oncogenicity
Action/Use Affected	Voluntary cancellation of the only product containing copper arsenate (basic).
Reference	42 FR 18422 April 7, 1977; PR Notice 83-1 February 17, 1983.

CREOSOTE

See Wood Preservatives, wood uses and nonwood uses.

Reference

49 FR 28666 July 13, 1984; 51 FR 1334 January 10, 1986; 53 FR 5524 February 24, 1988; 53 FR 24787 June 30, 1988.

CYANAZINE

Criteria of Concern

Teratogenicity

Action/Use Affected

In order to avoid cancellation of their cyanazine products, registrants must submit an application to amend the registration of their product. The application must propose to amend the registration of the product to include the following conditions and labeling modifications:

- 1.) Require the use of protective gloves when mixing or loading cyanazine or when adjusting, repairing, or cleaning equipment.
- 2.) Require the following precaution concerning the washing of protective gloves:

Protective gloves must be washed with soap and water after use and before removing from the hands.

- 3.) Require the use of closed systems in connection with aerial use and chemigation (product formulations that cannot be used in a closed loading system must prohibit aerial use and chemigation).
- 4.) Require use of a chemical resistant apron when mixing or loading.
- 5.) Require that all "Restricted Use" statements include a statement that cyanazine products have been classified for restricted use because cyanazine has caused birth defects in laboratory animals.
- 6.) Include the following precaution concerning the washing of contaminated clothing:

Cyanazine-contaminated clothing should be laundered separately from household laundry to prevent cross-contamination of the laundry. Heavily contaminated or drenched clothing and protective equipment must be discarded or destroyed in accordance with state and local regulations.

Existing Stocks Provisions

- 1.) EPA will allow use of existing stocks of cyanazine products for up to 6 months after final cancellation or approval of an amendment to the registration. Existing stocks may be used after this 6-month period only in accordance with the modifications identified above.
- 2.) Existing stocks of cyanazine products not relabeled as specified above must be disposed of in accordance with the Research Conservation and Recovery Act.
- 3.) Existing stocks of cyanazine products voluntarily cancelled prior to January 13, 1988, are not affected by these provisions.

Reference

53 FR 795 January 13, 1988.

CYHEXATIN

Criteria of Concern

Teratogenicity

Action/Use Affected

Voluntary cancellation, all products.

Reference

EPA's *Environmental News* November 1, 1987.

DAMINOZIDE

Criteria of Concern

Oncogenicity

Action/Use Affected

Cancelled, all daminozide products, for food uses. Remaining registrations for nonfood uses include cut chrysanthemums and bedding plants.

Special review of nonfood uses continued, pending an evaluation of the cancer studies in rats and mice with unsymmetrical dimethyl hydrazine, a degradate and metabolite of daminozide. Final study results to be submitted to EPA in January 1990.

Existing Stocks Provisions

The sale, distribution, shipment, and use of existing stocks of daminozide for food uses is prohibited in the U.S.

Reference

54 FR 47492 November 14, 1989.

DBCP

Criteria of Concern	Oncogenicity Mutagenicity Reproductive effects Ground water contamination
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Action/Use Affected	Cancelled, all products.
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Existing Stocks Provisions

- 1.) The sale, distribution, shipment, and use of existing stocks of DBCP for Hawaiian pineapple culture is prohibited in the U.S.
- 2.) Existing stocks that are not exported must be disposed of in accordance with the Resource Conservation and Recovery Act.

Reference	FIFRA Docket Nos. 398, 399, and 400 October 27, 1977; 42 FR 57543 November 3, 1977; FIFRA Docket No. 435 October 29, 1979; 46 FR 19592 March 31, 1981; 50 FR 1122 January 9, 1985; 50 FR 46512 November 8, 1985.
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2,4-D

Criteria of Concern

Carcinogenicity

Action/Use Affected

In order to avoid cancellation, registrants with 2,4-D products must make the following labeling revisions:

1.) Use Pattern Statements

All manufacturing-use products must state that they are intended for formulation into end-use products for acceptable use patterns.

2.) Disposal Statements

Certain unused stocks are listed as toxic hazardous waste under the Resource Conservation and Recovery Act (RCRA); others may be hazardous waste because of their chemical physical characteristics. The following is the appropriate pesticide disposal statement for all 2,4-D products, except those labeled for household use only:

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of federal law and may contaminate ground water. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency or the hazardous waste representative at the nearest EPA Regional Office for guidance.

Products labeled for household use only must bear the following disposal statement:

Securely wrap original container in several layers of newspaper and discard in trash.

3.) Use Directions, End-Use Products

The following statements are required in the use directions for all end-use products:

a.) Liquid products.

This product can reach ground water as a result of mixing and loading. To minimize ground water contamination from spills during mixing, loading and cleaning of equipment, take the following steps:

Mixing and Loading. When mixing, loading, or applying this product, wear chemical-resistant gloves. Wash nondisposable gloves thoroughly with soap and water before removing.

The mixing and loading of spray mixtures into the spray equipment must be carried out on an impervious pad (i.e., concrete slab or plastic sheeting) large enough to catch any spilled material. If spills occur, contain the spill by using an absorbent material (e.g., sand, earth, or synthetic absorbent). Dispose of the contaminated absorbent material by placing in a plastic bag and following disposal instructions on this label.

Triple rinse empty containers and add the rinsate to the mixing tank.

Cleaning of Equipment. When cleaning equipment, do not pour the washwater on the ground -- spray or drain over a large area away from wells and other water sources.

b.) Granular products.

This product can reach ground water from improper handling. To minimize ground water contamination from spills during loading and cleaning of equipment, take the following steps:

Handling. When handling this product, wear chemical-resistant gloves. Wash nondisposable gloves thoroughly with soap and water before removing. If spills occur, collect the material and dispose of by following disposal instructions on this label.

Cleaning of Equipment. When cleaning equipment, do not pour the washwater on the ground -- spray or drain over a large area away from wells and other water sources.

- c.) Products for use on pastures and rangeland grasses.

Labels for products registered for use on pastures and rangeland grasses must be revised to reflect the following intervals, if such intervals are not currently on the label:

- i.) A 7-day pregrazing interval for dairy cattle;
- ii.) A 30-day preharvest interval for grass cut for hay; and
- iii.) A 3-day preslaughter interval for meat animals.

- d.) Products for certain food and feed uses.

Label use directions for products registered for the following uses must be revised: potatoes, apples, pears, grapes, strawberries, barley and barley forage, corn and corn forage and fodder, millet, oats, rice and rice straw, rye, sorghum and sorghum forage and fodder, wheat, rangeland and pasture grass, asparagus, and sugarcane. The revisions pertain to preharvest intervals, ranges of diluent, and maximum seasonal application rates and/or specific requirements for each commodity. The registrants must propose the specific language.

Existing Stocks Provisions

- 1.) The shipment of existing stocks of 2,4-D products by registrants without the amended labeling specified above and in the September 1988 Reregistration Guidance Package was prohibited as of October 1, 1989.
- 2.) The sale, distribution, and shipment of existing stocks of 2,4-D products by persons other than the registrant without the required amended labeling will be prohibited in the U.S. as of October 1, 1990.

2,4-D

Reference

PR Notice 67-7 October 12, 1967. Reregistration Guidance Package 23-4; PR Notice 83-2; PR Notice 83-3; Reregistration Guidance Package September 1988.

DIALLATE

Criteria of Concern

Oncogenicity
Mutagenicity

Action/Use Affected

In order to avoid cancellation of their diallate products, registrants must modify the terms of registration to include the following labeling provisions:

1.) Restricted-Use Pesticide

For retail sale to and use only by certified applicators or persons under their direct supervision and only for those uses covered by the applicator's certification. See FIFRA Section 3(d).

2.) Protective Clothing Required

The following items of clothing must be worn when mixing, loading, or applying Avadex:

Long trousers and long-sleeved shirt or jacket of close-knit material.

Gloves made of rubber or other similar impermeable material.

Leather or rubber boots high enough to cover the ankle.

Reference

47 FR 27109 June 23, 1982.

DICOFOL

Criteria of Concern

Ecological effects

Action/Use Affected

Cancelled, all products containing greater than 0.1 percent DDT_r.

Existing Stocks Provisions

The sale, distribution, and shipment of existing stocks of dicofol products greater than 0.1 percent DDT_r is prohibited in the U.S.

Reference

51 FR 19508 May 29, 1986.

DIMETHOATE

Criteria of Concern

Oncogenicity
Mutagenicity

Action/Use Affected

Cancelled, all dimethoate products for use in dust formation.

In order to avoid cancellation for all other uses of dimethoate products, registrants must include the following labeling provisions:

1.) Required Clothing and Equipment for Application

All applicators, including homeowners and flaggers and personnel involved with the mixing, loading, and transferring operations, must wear the protective clothing and equipment enumerated below. Pilots are exempt from this requirement. The protective clothing and equipment to be worn is as follows:

- a.) Impermeable gloves (for example, rubber or plastic-covered gloves).
- b.) Rubber or synthetic rubber boots or boot covers.
- c.) Long-sleeved shirt and long pants, made of closely woven fabric.
- d.) Wide-brimmed hat.
- e.) Respirators must be worn by flaggers and mixer/loaders.

2.) Dimethoate Products for Aerial Application

These products must include the following statements:

AUTOMATIC FLAGGING DEVICES SHOULD
BE USED WHENEVER FEASIBLE.

IF HUMAN FLAGGERS ARE EMPLOYED,
THEY MUST WEAR THE PROTECTIVE
CLOTHING AND RESPIRATOR SPECIFIED
ON THIS LABEL.

Reference

46 FR 5334 January 19, 1981.

Criteria of Concern**Teratogenicity****Action/Use Affected**

In order to avoid cancellation of their dinocap products, registrants must include the following developmental toxicity warning statement on their product label:

- 1.) Use of this product may be hazardous to your health. This product has been determined to cause birth defects in laboratory animals. The following products do not require any label changes, except No. 1 above:
 - a.) Liquid and wettable powder formulations used on peaches/apricots, and field roses.
 - b.) Liquid formulations used on pears, apples, and in greenhouses.
 - c.) All home and garden uses.
- 2.) All liquid formulation products that bear uses for pears must limit the maximum application rate to 0.47 pounds/acre.
- 3.) All wettable powder formulation products that bear uses for apples must bear the following label statement for use on apples:
 - a.) During the mixing and loading of concentrated dinocap, wear a protective suit of one or two pieces that covers all parts of the body except the head, hands, and feet. Wear chemical resistant gloves, apron, and shoes, and shoe coverings or boots. Wear goggles or a face shield. A hood or hat may also be worn.
 - b.) Whenever possible, it is recommended that application be made from a vehicle with a completely enclosed cab. All vents and windows of the cab should remain closed during application. During application from a completely enclosed cab, wear a long-sleeved shirt and long pants. A clean set of protective clothing and equipment, as defined here, must be available in case you must exit the cab in treated areas. Always wear protective gloves upon exiting the cab. Remove protective clothing and equipment before reentering the cab to prevent cab contamination.

- c.) If application from a vehicle with a completely enclosed cab is not possible and during repair and clean-up of equipment for reentry into treated areas prior to drying of the spray, wear a protective suit of one or two pieces that covers all parts of the body except the hands, feet, and head. Wear chemical resistant gloves and chemical resistant shoes, shoe coverings or boots. A hood or hat may also be worn. During air blast or mist blower application a protective hood or wide-brim hat must be worn.
 - d.) Warning: Wearing the protective suit for the prolonged periods required for application may produce heat stress at temperatures above 85° F. on a cloudy day or 80° F. on a sunny day. Application of this product must be conducted from enclosed cab vehicles when the temperature exceeds 85° F. (80° F. on sunny days) or delayed until the temperature drops.
 - e.) After application of the pesticide is completed, remove all clothes and shoes. Shower using soap and water. Redress only in clean clothes. Do not use contaminated clothing. Wash nondisposable protective equipment with soap or detergent and water after each use. Personal and nondisposable protective clothing worn during use must be laundered separately from household articles. Clothing or protective equipment heavily contaminated or drenched with dinocap must be destroyed according to state or local regulations. Heavily contaminated or drenched clothing cannot be adequately decontaminated.
- 4.) All liquid and wettable powder formulations that bear uses for grapes and field cucurbits and all wettable powder formulations that bear uses for pears must bear the following label statement for use on these commodities:
- a.) See 3.a. above.
 - b.) This product must be applied from a vehicle with an enclosed cab. See 3.b. for required protection.
 - c.) See 3.c.
 - d.) See 3.e.

DINOCAP

Existing Stocks Provisions

The sale, distribution, and shipment of dinocap products that do not bear the amended labeling as specified above was prohibited in the U.S. as of August 6, 1989.

Reference

54 FR 5908 February 6, 1989.

DINOSEB

Criteria of Concern	Teratogenicity Reproductive effects Acute effects
Action/Use Affected	Cancelled, all products.

Existing Stocks Provisions

- 1.) The sale, distribution, and shipment of existing stocks of dinoseb for use on caneberries in Washington and Oregon was prohibited after the 1989 use season.
- 2.) The sale, distribution, and shipment of existing stocks of dinoseb for all other uses is prohibited in the U.S.

Reference	51 FR 36634 October 14, 1986; IF&R Docket No. 590 June 10, 1988. U.S. Court of Appeals March 20, 1989.
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DISINFECTANTS

Action/Use Affected

Cancelled, products bearing labeling claims involving the terms *germ proofing*, *germ proofs*, and *germ proof*.

Reference

PR Notice 69-13 August 8, 1969.

EBDCs

Criteria of Concern

Oncogenicity
Teratogenicity

Action/Use Affected

All zineb products registered for agricultural food uses are either suspended for failure to submit data to the Agency, or cancelled.

All nabam products registered for agricultural food uses are either suspended for failure to submit data to the Agency or have had their registrations amended to delete agricultural food uses from the product labels.

The following crop uses are retained:

Maneb	Almonds, bananas, potatoes, sugar beets, and sweet corn.
Metiram	Potatoes.
Mancozeb	Asparagus, bananas, cranberries, figs, grapes, onions, peanuts, potatoes, sugar beets, sweet corn, tomatoes, and wheat.

The following crop uses are deleted:

Maneb	Peppers, tomatoes, onions, beans, broccoli, cabbage, cantaloupes, watermelon, other melons, cucumbers, squash, apples, spinach, stone fruits, carrots, celery, turnips, cauliflower, brussels sprouts, collards, mustard greens, kale, rhubarb, lettuce, Chinese cabbage, eggplant, endive, grapes, and pumpkins.
Metiram	Apples.
Mancozeb	<u>DuPont Corporation</u> has deleted: apples, crab apples, quince, pears, papayas, pineapples, carrots, celery, fennel, cucumbers, melons, squash (summer and winter), tobacco (plant bed and field), cotton (foliar), field corn, oats, barley, and rye.

Rohm and Haas Company has deleted:
apples, barley, cantaloupes, carrots,
celery, corn (field and hybrid seed
corn), crab apples, cucumbers, fennel,
melons, muskmelons, oats, papaya,
pears, pineapples, quince rye, squash,
and watermelons.

Pennwalt Corporation has deleted:
cucumbers, melons, summer squash,
field corn, celery, carrots, apples, pears,
crab apples, and quince.

Existing Stocks Provisions

1.) Zineb

- a.) The sale and distribution of existing stocks of zineb products labeled for agricultural food uses by registrants and supplemental distributors are prohibited.
- b.) Persons other than zineb registrants and supplemental distributors with these products in their possession may sell or distribute existing stocks of these zineb products until these stocks are exhausted.

2.) Nabam

- a.) The sale and distribution of existing stocks of nabam labeled for agricultural use by registrants and supplemental distributors are prohibited.
- b.) Persons other than nabam registrants or distributors with these products in their possession may sell or distribute existing stocks of these nabam products until these stocks are exhausted.

3.) Maneb, Metiram, Mancozeb

- a.) Rohm and Haas, DuPont, and BASF are responsible for ensuring that all of their maneb, metiram, and mancozeb products

EBDCs

released for shipment or in the channels of trade after January 1, 1990, bear the amended labeling specified above.

- b.) Pennwalt is responsible for ensuring that all of its maneb and mancozeb products bear the amended labeling specified above, by the date listed in the February FR Notice.
- c.) Products already in the possession of growers are not required to be relabeled.
- d.) Formulators of end-use products may not use any relabeled maneb, metiram, or mancozeb technical registered by Rohm and Haas, DuPont, Pennwalt, or BASF to formulate any end-use products that are labeled for a deleted use.

Reference

47 FR 47669 October 27, 1982; 54 FR 50020 December 4, 1989; 55 FR? February ?, 1990.*

* At this writing, the *Federal Register* notice, including the latest restrictions for EBDCs, had not yet been published. Please contact the Agency's Registration Division for further information regarding this reference.

EDB

Criteria of Concern Oncogenicity
 Mutagenicity
 Reproductive effects

Action/Use Affected Cancelled, all products.

Existing Stocks Provisions

The use of existing stocks of EDB for beehive supers and honeycombs is permitted.

Reference 48 FR 46228 October 11, 1983; 49 FR 4452 February 6, 1984; 49 FR 14182 April 10, 1984; 50 FR 12072 March 27, 1985; FIFRA Sec. 3 registration cancelled for nonpayment of 1989 maintenance fee, October 12, 1989.

ELECTROMAGNETIC PEST CONTROL DEVICES

Action/Use Affected

Products ineffective in controlling rodents and insects. Regulatory actions have been taken to remove them from the marketplace.

Reference

EPA Publication No. EPA 340102-80-001, October 1980, *Investigation of Efficacy and Enforcement Activities Relating to Electromagnetic Pesticide Control Devices.*

ELECTRONIC (SONIC) MOSQUITO REPELLING DEVICES

Action/Use Affected

Products ineffective in repelling mosquitoes. Regulatory actions have been taken to remove them from the marketplace.

Reference

EPA's *Environmental News* October 13, 1976.

EPN

Criteria of Concern	Neurotoxicity Hazard to aquatic organisms
Action/Use Affected	Voluntary cancellation, all products.
Reference	48 FR 39494 August 31, 1983; 52 FR 27453 July 21, 1987.

FLUOROACETAMIDE

Criteria of Concern	Acute toxicity to mammalian and avian species Reduction in endangered and nontarget species Acute toxicity without antidote
Action/Use Affected	Cancelled, all products.
Reference	Label amendment accepted by OPP November 2, 1979; 45 FR 13189 February 28, 1980; FIFRA Sec. 3 cancelled registration for nonpayment of 1989 registration maintenance fee, October 12, 1989.

HEPTACHLOR

See Chlordane.

Reference

PR Notice 74-1 December 2, 1974; 41 FR 7552 February 19, 1976; FIFRA Docket No. 336, et al., March 6, 1978; PR Notice 78-2 March 28, 1978.

KEPONE

Criteria of Concern

Oncogenicity

Action/Use Affected

Cancelled, all products.

A summary of kepone products follows:

1.) Inaccessible Products

- a.) Antrol Ant Trap (Reg. No. 475-11), Black Flag Ant Trap (Reg. No. 475-82), Grant's Roach Trap (Reg. No. 1663-22), Grant's Ant Control (Reg. No. 1663-24), and Dead Shot Ant Killer (Reg. No. 274-23) were cancelled as of May 11, 1977.

Inaccessible products includes those enclosed kepone traps made from metal or plastic, as well as metal stakes containing enclosed kepone bait that are hammered into the ground.

- b.) Black Leaf Ant Trap (Reg. No. 5887-63), Hide Roach and Ant Trap (Reg. No. 3325-4), Lily's Ant Trap with Kepone (Reg. No. 460-17), T.N.T. Roach and Ant Killer (Reg. No. 2095-2), Johnston's No-Roach Traps (Reg. No. 2019-19), Mysterious Ant Trap with Kepone (Reg. No. 395-19), Magikil Ant Trap with Kepone (Reg. No. 395-21), Magikil Roach Trap with Kepone (Reg. No. 395-25), Ant-Not Ant Trap (Reg. No. 358-20), Nott Roach Trapp (Reg. No. 358-129), E-Z Ant Trap Contains Kepone (Reg. No. 506-109), Tat Ant Trap (Reg. No. 506-126), and Ant Check Ant Trap (Reg. No. 506-129) were effectively cancelled on May 1, 1978.

2.) Accessible Products

All of these products were cancelled as of December 13, 1977.

Accessible products includes those that, in normal use, would be removed from their containers, as well as foil or cardboard-covered traps.

Existing Stocks Provisions

- 1.) The sale, distribution, and shipment of existing stocks of inaccessible products formulated prior to May 11, 1977, is permitted until such stocks are exhausted.
- 2.) The sale, distribution, and shipment of existing stocks of accessible products is prohibited in the U.S.

Reference

41 FR 24624 June 17, 1976; 42 FR 18885 April 11, 1977; 42 FR 38205 July 27, 1977; FIFRA Docket Nos. 392 et al. October 27, 1977, and the affirmation of FIFRA Docket Nos. 392 et al. by the Judicial Officer December 13, 1977.

LEAD ARSENATE

See Wood Preservatives, nonwood uses.

Reference

53 FR 5524 February 24, 1988; 53 FR 24787 June 30, 1988.

MERCURY

Criteria of Concern	Hazard to aquatic organisms Acute toxicity
Action/Use Affected	<p>Cancelled, all products, except for the following uses:</p> <ol style="list-style-type: none">1.) As a fungicide in the treatment of textiles and fabrics intended for continuous outdoor use;2.) As a fungicide to control brown mold on freshly sawn lumber;3.) As a fungicide treatment to control Dutch elm disease;4.) As an in-can preservative in water-based paints and coatings;5.) As a fungicide in water-based paints and coatings used for exterior application;6.) As a fungicide to control winter turf diseases*, such as <i>Sclerotinia boreales</i>, and gray and pink snow mold subject to the following:<ol style="list-style-type: none">a.) The use of these products shall be prohibited within 25 feet of any water body where fish are taken for human consumption.b.) These products can be applied only by or under the direct supervision of golf course superintendents.c.) The products are classified as restricted-use pesticides when they are reregistered and classified in accordance with Section 3(d) of FIFRA.
Reference	PR Notice 72-5 March 22, 1972; FIFRA Docket No. 246 et al. December 22, 1975; 41 FR 16497 April 19, 1976; 41 FR 26742 June 29, 1976; 41 FR 36068 August 26, 1976.

* The term *winter turf diseases* refers to the forms of snow mold that can attack and damage the fine turf of greens, tees, and aprons.

METALDEHYDE

Criteria of Concern

Acute and chronic wildlife effects

Action/Use Affected

Registrants must include the following statement on the front panel of the product label:

This pesticide may be fatal to dogs or other pets if eaten. Keep pets out of treated area.

Reference

PR Notice 74-7 July 1, 1974.

MIREX

Criteria of Concern

Carcinogenicity
Bioaccumulation
Hazard to wildlife and other chronic effects

Action/Use Affected

Cancelled, all products.

Although all products are cancelled, existing stocks of Harvester Bait 300, Reg. No. 38962-5, may only be sold and used for the control of the pheidole ant, Argentine ant, and fire ant on pineapples in Hawaii.

The application of Harvester Bait 300 is subject to the following restrictions:

- 1.) Aerial Application
No longer permitted.
- 2.) Ground Application
 - a.) Permissible in all areas of infestation provided that there is no ground application to aquatic and heavily forested areas or areas where run-off or flooding will contaminate such areas.*
 - b.) Treatment shall be confined to areas where the imported fire ants are causing significant problems.

Existing Stocks Provisions

The sale, distribution, and use of Mirex products (with the exception of Harvest Bait 300) is prohibited in the U.S.

Reference

FIFRA Docket No. 293 October 26, 1976; 41 FR 56694
December 29, 1976.

* *Aquatic areas* encompasses, without limitation, estuaries, rivers, streams, wetlands (those land and water areas subject to inundation by tidal, riverine, or lacustrine flowage), lakes, ponds, and other bodies of water.

MONOCROTOPHOS

Criteria of Concern

Avian effects

Action/Use Affected

Voluntary cancellation, all products.

July 30, 1989, was the last date for use of the product for manufacturing purposes, and the last date for sale and distribution by the registrant, DuPont.

Existing Stocks Provisions

The sale, distribution, shipment, and use of existing stocks of monocrotophos products is prohibited in the U.S.

Reference

Letter from registrant to EPA, June 13, 1988.

OMPA

Criteria of Concern

Oncogenicity

Action/Use Affected

Voluntary cancellation, all products.

Reference

41 FR 21859 May 28, 1976.

10,10'-OXYBISPHENOXARSINE

Criteria of Concern

Oncogenicity
Mutagenicity
Teratogenicity

Action/Use Affected

In order to avoid cancellation, registrants must amend product labels to eliminate use in wind breakers and baby pants.

Reference

Special Pesticide Review Division's position document on 10,10'-oxybisphenoxarsine approved April 20, 1979.

OXYFLUORFEN

Criteria of Concern	Oncogenicity
Action/Use Affected	<p>Cancelled, all oxyfluorfen products (Goal) for use on nonbearing and bearing fruits and nuts, conifer seedbeds, transplant and out-plantings, soybeans, and field corn (in conjunction with the USDA Witchweed Eradication Program), unless registrants modify the conditions of registration as follows:</p> <p>The perchloroethylene (PCE) contamination of oxyfluorfen products (Goal) must not exceed 200 ppm. This must be stated in the confidential statement of formula for each registered oxyfluorfen product.</p>
Reference	47 FR 27118 June 23, 1982.

PARATHION (ETHYL)

Criteria of Concern

Acute toxicity
Toxic to aquatic organisms

Action/Use Affected

Registration of ethyl parathion limited to those products packed in one gallon containers or larger.

Manufacturers and formulators of registered ethyl parathion should be in compliance with the standardized safety label that was enclosed with PR 71-2.

Registrants must include the following label statement on the front panel of their parathion products:

RESTRICTED USE PESTICIDE due to very high acute toxicity to humans and birds. For retail sale to and use only by certified applicators or persons under their direct supervision and only for those uses covered by the certified applicator's certification. Direct supervision for this product is defined as the application, mixing, loading, repair, and cleaning of application equipment. Commercial certified applicators must also ensure that all persons involved in these activities are informed of the precautionary statements.

Reference

PR Notice 71-2 April 5, 1971; 40 CFR 152.175.

PCNB

Criteria of Concern

Onocogenicity

Action/Use Affected

Voluntary cancellation of all dust-based formulations except those used in planter box seed treatment.

Registrants of PCNB products must make the following amendments:

- 1.) Reduction of the hexachlorobenzene (HCB) level in technical PCNB products to 0.1 percent or less because of risks associated with the oncogenic effects of HCB.

- 2.) Granular Formulations Used in Parks and Golf Courses

These products must include on their labels the following precautionary statement:

Do not apply directly adjacent to potable water supplies.

- 3.) Homeowner Products

These products must include on their labels the following precautionary statement:

Avoid contact with skin by wearing the following protective clothing: long-sleeved shirt, long pants, socks, and shoes. Wash hands thoroughly after using.

- 4.) Professional Applicator Products

These products must include the following protective clothing requirements on their labels during mixing/loading procedures:

Granular formulations: gloves, long-sleeved shirt, long pants, socks, and shoes.

Emulsifiable concentrate and liquid formulations: respirator, gloves, long-sleeved shirt, long pants, socks, and shoes.

Reference

47 FR 18177 April 28, 1982.

PENTACHLOROPHENOL

See Wood Preservatives, wood and nonwood uses.

Reference

49 FR 28666 July 13, 1984; 51 FR 1334 January 10, 1986; 53 FR 5524 February 24, 1988.

PHENARSAZINE CHLORIDE

Action/Use Affected Voluntary cancellation, all products.

Reference 42 FR 59776 November 21, 1977.

POLYCHLORINATED BIPHENYLS

Criteria of Concern	Oncogenicity
Action/Use Affected	Cancelled, all products.
Reference	PR Notice 70-25 October 29, 1970.

POLYCHLORINATED TERPHENYLS

Criteria of Concern	Chronic toxicity to aquatic organisms
Action/Use Affected	Cancelled, all products.
Reference	PR Notice 70-25 October 29, 1970.

PRONAMIDE

Criteria of Concern

Oncogenicity

Action/Use Affected

Cancelled, all pronamide products for hand spray application, except those used on ornamentals and nursery stock.

In order to avoid cancellation and denial of registrations of all pronamide products registered for use on lettuce, alfalfa, forage legumes, and other uses, registrants must make the following amendments:

1.) Wettable Powder Products

Pronamide labels for wettable powder products must include the following statement:

RESTRICTED-USE PESTICIDE. For retail sale to and use only by certified applicators or persons under their direct supervision and only for those uses covered by the applicator's certification.

Because pronamide has produced tumors in laboratory animals, this product is for use only by certified applicators or persons under their direct supervision and only for uses covered by the certified applicator's certification.

2.) General Precautions

Under general precautions, the labels must include the following statements:

Take special care to avoid contact with eyes, skin, or clothing.

Wash clothing and gloves after use.

3.) Protective Clothing

The following items of clothing are required when mixing or applying pronamide:

- a.) Long-sleeved shirts and long pants, preferably one piece (overalls).
- b.) Hat with brim.
- c.) Heavy duty fabric or rubber work gloves.

PRONAMIDE

- d.) Hand-spray applications of pronamide will require the use of heavy duty leather or rubber boots.

4.) Water-Soluble Packaging

For all wettable powder products introduced in commerce, the label must include the following statement:

Dilution Instructions

The enclosed pouches of this product are water-soluble. Do not allow pouches to become wet prior to adding to the spray tank. Do not handle the pouches with wet hands or gloves. Always reseal overwrap bag to protect remaining unused pouches. Do not remove except to add directly to the spray tank.

Add the required number of unopened pouches as determined by the dosage recommendations into the spray tank with agitation. Depending on the water temperature and degree of agitation, the pouches should dissolve completely within approximately five minutes from the time they are added to the water.

5.) Granular Formulation for Turf Use

For turf use of granular formulation pronamide, the label must include the statement:

This product should be watered in within 24 hours.

Reference

44 FR 61640 October 26, 1979; Registration Standard issued May 15, 1987.

QUATERNARY AMMONIUM COMPOUNDS

Criteria of Concern

Other chronic effects

Action/Use Affected

Cancelled, for use as a sanitizer in poultry drinking water.

Reference

PR Notice 73-5 August 29, 1973.

SAFROLE

Criteria of Concern

Oncogenicity
Mutagenicity

Action/Use Affected

Voluntary cancellation, all products.

Existing Stocks Provisions

The sale, distribution, shipment, and use of existing stocks of Surf-Kote Pet Repellent, Reg. No. 1811-8, and Scram Dog Repellent Spray, Reg. No. 239-2057, are permitted only be persons other than the registrants.

Reference

42 FR 11039 February 25, 1977; 42 FR 16844 March 30, 1977; 42 FR 29957 June 10, 1977.

SEED TREATMENTS

Criteria of Concern	Other chronic effects
Action/Use Affected	Cancelled, all products not containing a dye or discoloring agent that will impart an unnatural color to the seed, unless labeling includes directions for adding a dye at the time of treatment. Exceptions to this are products bearing directions for use solely as planter box treatments.
Reference	PR Notice 70-17 June 26, 1970; PR Notice 70-24 October 28, 1970.

SILVEX/2,4,5-T

Criteria of Concern

Oncogenicity
Mutagenicity
Fetotoxicity

Action/Use Affected

Cancelled, all products.

Reference

PR Notice 70-22 September 28, 1970; 44 FR 15917
March 15, 1979; 44 FR 41536 July 17, 1979; 48 FR
48434 October 18, 1983. Ruling by an Administrative
Law Judge, January 2, 1985.

SODIUM ARSENATE

See Wood Preservatives, nonwood uses.

Reference

53 FR 5524 February 24, 1988; 53 FR 24787 June 30, 1988.

SODIUM ARSENITE

See Wood Preservatives, nonwood uses.

Reference

PR Notice 67-2 August 1, 1967; Interpretation No. 25 August 1968; 53 FR 5524 February 24, 1988; 53 FR 24787 June 30, 1988.

SODIUM CYANIDE

Criteria of Concern

Toxicity to wildlife and endangered species
Acute toxicity

Action/Use Affected

Cancelled and suspended, all products for mammalian predator control except the registration of sodium cyanide capsules for use in the M-44 device is allowed for the purpose of controlling certain wild canid predators subject to the following 26 restrictions:

- 1.) Use of the M-44 device shall conform to all applicable Federal, state, and local laws and regulations.
- 2.) Applicators shall be subject to such other regulations and restrictions as may be prescribed from time to time by the EPA.
- 3.) Each applicator of the M-44 device shall be trained in (1) safe handling of the capsules and device, (2) proper use of the antidote kit, (3) proper placement of the device, and (4) necessary recordkeeping.
- 4.) The M-44 devices and sodium cyanide capsules shall not be sold or transferred to, or entrusted to the care of, any person not supervised or monitored by the registrant.
- 5.) The M-44 device shall only be used to take wild canids suspected of preying on livestock, poultry, or federally designated threatened or endangered species.
- 6.) The M-44 device shall not be used solely to take animals for the value of their fur.
- 7.) The M-44 device shall only be used on or within 7 miles of a ranch unit or allotment where losses due to canid predation are occurring or where losses can be reasonably expected to occur based on recurrent prior experience of predation on the ranch unit or allotment. Full documentation of livestock depredation, including evidence that such losses were caused by wild canids, will be required before applications of the M-44 are undertaken.

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- 8.) The M-44 device shall not be used in (1) national or state parks, (2) national or state monuments, (3) Federally designated wilderness areas, (4) wildlife refuge areas, (5) prairie dog towns, and (6) areas where exposure to the public and family pets is probable.
- 9.) The M-44 shall not be used in areas where threatened or endangered species might be adversely affected. Each applicator shall be issued a map, prepared by or with the consultation of the U.S. Fish and Wildlife Service, which clearly indicates such areas.
- 10.) One person other than the individual applicator shall have knowledge of the exact placement location of all M-44 devices in the field.
- 11.) In areas where more than one government agency is authorized to place M-44 devices, the agencies shall exchange placement information and other relevant facts to ensure the maximum number of M-44s allowed is not exceeded.
- 12.) The M-44 device shall not be placed within 200 feet of any lake, stream, or other body of water. Natural depression areas that catch and hold rainfall only for short periods of time shall not be considered bodies of water for purposes of this restriction.
- 13.) The M-44 device shall not be placed in areas where food crops are planted.
- 14.) M-44 devices shall be placed at least 50 feet or more from any public road or pathway as may be necessary to remove it from the sight of persons and domestic animals using any such public road or pathway.
- 15.) The maximum density of M-44s placed in any 100-acre pastureland area shall not exceed 10, and the density in any one square mile of open range shall not exceed 12.

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- 16.) No M-44 device may be placed within 30 feet of draw stations (livestock carcasses). No more than four M-44 devices shall be placed per draw station; and no more than five stations shall be operated per square mile.
- 17.) Supervisors of applicators shall check the records, warning signs, and M-44 devices of each applicator at least once a year to verify that all applicable restrictions, laws, and regulations are being strictly followed.
- 18.) M-44 devices shall be inspected by the applicator at least once a week, weather permitting access, to check for interference or unusual conditions and shall be serviced as required.
- 19.) Damaged or nonfunctional M-44 devices shall be removed from the field.
- 20.) An M-44 device shall be removed from an area if, after 30 days, there is no sign that a target predator has visited the site.
- 21.) All persons authorized to possess and use M-44 capsules and devices shall store said devices under lock and key.
- 22.) Used sodium cyanide capsules shall be disposed of by deep burial or at a proper landfill site.
- 23.) Bilingual warning signs in English and Spanish shall be used in all areas containing M-44 devices. All such signs shall be removed when M-44 devices are removed.
 - a.) Main entrances or commonly used access points to areas in which M-44 devices are set shall be posted with warning signs to alert the public to the toxic nature of the cyanide and to the danger to pets. Signs shall be inspected weekly to ensure their continued presence and ensure that they are conspicuous and legible.
 - b.) An elevated sign shall be placed within 6 feet of each individual M-44 device warning persons not to handle the device.

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- 24.) Each authorized or licensed applicator shall carry an antidote kit on his person when placing and/or inspecting M-44 devices. The kit shall contain at least six pearls of amyl nitrate and instructions on their use. Each authorized or licensed applicator shall also carry on his person instructions for obtaining medical assistance in the event of accidental exposure to sodium cyanide.
- 25.) In all areas where the use of the M-44 device is anticipated, local hospitals, doctors, and clinics shall be notified of the intended use and informed of the antidotal and first-aid measures required for treatment of cyanide poisoning. It is the responsibility of the supervisor to perform this function.
- 26.) Each authorized M-44 applicator shall keep records dealing with the placement of the device and results of each placement. Said records shall include, but need not be limited to:
 - a.) The number of devices placed.
 - b.) The location of each device placed.
 - c.) The date of each placement, as well as the date of each inspection.
 - d.) The number and location of devices that have been discharged and the apparent reason for each discharge.
 - e.) The species of animal taken.
 - f.) All accidents or injuries to humans or domestic animals.

Reference

PR Notice 72-2 March 9, 1972. 10th Circuit Court's Vacation of the Wyoming District Court's Predicide Injunction, December 2, 1975. 40 FR 44726 September 29, 1975; 41 FR 21690 May 27, 1976; 42 FR 8406 February 10, 1977; 53 FR 9515 March 19, 1988.

SODIUM FLUORIDE

Action/Use Affected

Cancelled for home use, if the product contains more than 40 percent of this compound.

Reference

PR Notice 70-14 June 1, 1970.

SODIUM MONOFLUOROACETATE (1080)

Criteria of Concern	Reduction in nontarget and endangered species
Action/Use Affected	<p>Cancelled, all products except those used for the following:</p> <ul style="list-style-type: none">a.) Livestock collars for predicide use, provided label requirements established by EPA are followed. Exact label requirements can be obtained from the EPA Registration Division.b.) Control of certain rodents in California and Colorado, provided requirements established by EPA are followed. These uses are currently under review by the Registration Division of EPA. Exact requirements and restrictions can be obtained by contacting the EPA Registration Division.
Reference	PR Notice 72-2 March 9, 1972. 10th Circuit Court's Vacation of the Wyoming District Court's Predicide Injunction, December 2, 1975. 49 FR 4830 February 5, 1984; 50 FR 31012 July 31, 1985.

STROBANE

Criteria of Concern	Oncogenicity
Action/Use Affected	Voluntary cancellation, all products.
Reference	41 FR 26607 June 28, 1976.

STRYCHNINE

Criteria of Concern	Reduction in nontarget and endangered species
Action/Use Affected	<ol style="list-style-type: none">1.) Cancellation and suspension of products used for mammalian predator control. Label should have instructions for predator use blocked out. Agency may consider registration of strychnine to control rabid skunks.2.) Cancellation of registrations and denial of future registrations for strychnine-containing products for the following uses:<ol style="list-style-type: none">a.) Control of deer mice, and chipmunks on rangeland, pasture, cropland, and nonagricultural sites; marmots/woodchucks on rangeland, cropland, and pasture; and cotton rats, kangaroo rats, mountain beavers, opossums, rabbits, and jackrabbits (except around airports) on nonagricultural sites.3.) Cancellation of registrations and denial of future applications for registration for strychnine-containing products for control of the following rodents, unless certain specifications and label amendments are made:<ol style="list-style-type: none">a.) Ground squirrels, prairie dogs, and meadow mice on rangeland, cropland, and nonagricultural sites.b.) Cotton rats, kangaroo rats, and jackrabbits on rangeland, pastures, and cropland.c.) Marmots/woodchucks on nonagricultural sites.d.) Birds on croplands.e.) Birds on nonagricultural sites.

The use of strychnine varies among states according to the geographic location of certain endangered species and the evidence of one or more black-footed ferrets in a survey of land in which strychnine is to be applied. Other restrictions include placement of baits and disposal of carcasses. Each state may designate an appropriate

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agency to conduct its strychnine program. Consult with the state or with the U.S. Fish & Wildlife Service prior to use.

At this writing, the United States District Court for the District of Minnesota has issued an order requiring the temporary cancellation of all registrations of pesticides containing strychnine for above-ground use. The temporary cancellation does not affect registrations limited to below-ground use. If a registrant uses a product that permits both above- and below-ground use, a label permitting below-ground use only may be requested from the EPA. This cancellation will remain in effect until either the conditions established in the court's order are fulfilled or the order is overturned on appeal.

Reference

PR Notice 72-2 March 9, 1972. 10th Circuit Court's Vacation of the Wyoming District Court's Predicide Injunction, December 2, 1975. 48 FR 48522 October 19, 1983; 51 FR 28623 August 8, 1986; 52 FR 6762 March 4, 1987; 53 FR 18952 May 25, 1988.

2,4,5-T

See Silvex

Reference

**PR Notice 70-22 September 28, 1970; 44 FR 15917
March 15, 1979; 44 FR 41536 July 17, 1979; 48 FR
48434 October 18, 1983. Ruling by an Administrative
Law Judge, January 2, 1985.**

2,4,5-TCP AND ITS SALTS

Criteria of Concern	Oncogenicity Fetotoxicity
Action/Use Affected	Cancelled, all products.

Existing Stocks Provisions

The sale, distribution, shipment, and use of existing stocks of 2,4,5-TCP and its salts is prohibited in the U.S. and must be disposed of in accordance with the Resource Conservation and Recovery Act.

Reference	PR Notice 70-22 September 28, 1970; PR Notice 70-13 May 1, 1970; 44 FR 15874 March 15, 1979; 44 FR 41531 July 17, 1979; 48 FR 48434 October 18, 1983; 52 FR 15549 April 29, 1987.
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THALLIUM SULFATE

Criteria of Concern	Chronic and acute toxicity Reduction in endangered and nontarget species
Action/Use Affected	Cancelled and suspended, all products.
Reference	PR Notice 72-3 March 9, 1972.

TOK

Criteria of Concern	Other chronic effects
Action/Use Affected	Voluntary cancellation, all products.
Reference	49 FR 2151 January 19, 1984.

TOXAPHENE

Criteria of Concern

Oncogenicity
Population reduction in nontarget species
Acute toxicity to aquatic organisms
Chronic effects to wildlife

Action/Use Affected

Cancelled, all products.

Existing Stocks Provisions

- 1.) The sale, distribution, shipment, and use of existing stocks of toxaphene products is prohibited in the U.S., except for the following uses:
 - a.) Cattle dip for scabies control.
 - b.) Pineapples in Puerto Rico.
 - c.) Bananas in the Virgin Islands.
 - d.) Emergency treatment of cotton, corn, and small grains.
- 2.) All other stocks must be disposed of in accordance with the Resource Conservation and Recovery Act.

Reference

PR Notice 69-5 February 14, 1969; 47 FR 53784
November 29, 1982.

TRIBUTYL TIN (TBT)

Criteria of Concern

Acute and chronic toxicity to nontarget organisms

Action/Use Affected

In order to avoid cancellation of their TBT paint products, registrants must:

- 1.) Comply with the Organotin Antifouling Paint Control Act (OAPCA) of 1988 average daily release rate limit of 4.0 ug organotin/cm²/day.
- 2.) Comply with OAPCA's prohibition on the use of TBT antifouling paints on all nonaluminum vessels under 82 feet (25 meters) in length (on deck).
- 3.) Are classified as restricted-use pesticides, restricting their sale to certified commercial applicators and their use to persons under the direct supervision of an on-site certified commercial applicator (except for products packaged in 16 ounce or less spray-can containers that are labeled for use only on outboard motors, propellers, and other nonhull underwater aluminum components). This restricted-use classification of TBT begins March 1, 1990.
- 4.) Do not have labeling that requires compliance with applicable OSHA regulations and with the following directions for use:

During and after paint removal and or application of new TBT paint, employ methods designed to prevent introduction of TBT paints into aquatic environments.

Following removal of TBT paint and/or application of new TBT paint, all paint chips and spent abrasives, paint containers, unused paint, and any other waste products from paint removal or application must be disposed of in a sanitary landfill.

- 5.) Limit certain uses for some types of products, as specified herein.

The Agency is requiring that the registrants develop and submit a prototype training program for the use, disposal, and removal of TBT paints and paint wastes within 180 days from the date of application for conditional registration.

TRIBUTYLTIN (TBT)

Existing Stocks Provisions

The sale, distribution, and use of existing stocks of cancelled tributyltin products is prohibited in the U.S.

Reference

53 FR 39022 October 4, 1988; 50 FR 778 January 8, 1986; 52 FR 37510 October 7, 1987.

TRIFLURALIN

Criteria of Concern

Oncogenicity
Mutagenicity

Action/Use Affected

In order to avoid cancellation of all trifluralin products, registrants must amend the terms of registration as follows:

1.) Confidential Statement of Formula

- a.) Registrants must amend the inert ingredients statement of formula for each technical registered product to read as follows:

Total N-nitrosamine
contamination: no greater than
0.5 ppm.

- b.) Registrations for formulated registered products must be amended to include the following statement in the confidential statement of formula:

Total N-nitrosamine
contamination: no greater than
(number to be calculated as
follows: 0.5 ppm total N-
nitrosamine contamination
allowed in technical trifluralin x
X% technical trifluralin in the end-
use product x 2 to allow for
possible generation of
nitrosamines during formulation).

2.) Quality and Records

Registrants of trifluralin pesticides products must maintain accurate records of their quality control efforts, which will be subject to EPA review and must inform EPA of the quality control procedures that they will adopt to ensure that the N-nitrosamine contamination limit listed in the confidential statement of formula will not be exceeded.

Reference

47 FR 33777 August 4, 1982.

VINYL CHLORIDE

Criteria of Concern

Oncogenicity

Action/Use Affected

Cancelled and suspended, all pesticide products containing this compound, whether as an active or inert ingredient, for uses in the home, food-handling establishments, hospitals, or in enclosed areas.

Reference

PR Notice 74-5 April 30, 1974; 40 FR 3494 January 22, 1975.

**WOOD PRESERVATIVES
INORGANIC ARSENICALS, PENTACHLOROPHENOL, CREOSOTE
(WOOD USES ONLY)**

Criteria of Concern	Oncogenicity Mutagenicity Teratogenicity
Action/Use Affected	In order to avoid cancellation, registrants must adhere to the terms and conditions of the <i>Federal Register</i> notices cited for creosote, pentachlorophenol, and inorganic arsenicals -- wood uses only.
Reference	49 FR 28666 July 13, 1984; 51 FR 1334 January 10, 1986.

**WOOD PRESERVATIVES
INORGANIC ARSENICALS, PENTACHLOROPHENOL, CREOSOTE
(NONWOOD USES ONLY)**

Criteria of Concern

Oncogenicity
Mutagenicity
Teratogenicity

Action/Use Affected

A. Inorganic Arsenicals

All registered products, for nonwood use that contain the inorganic arsenicals lead arsenate, calcium arsenate, sodium arsenate, and sodium arsenite are cancelled and applications denied, with the exception of the following:

- 1.) Arsenic trioxide insecticide use (solid formulation manufactured in a sealed metal container only) for:

Domestic outdoor-domestic dwellings
Domestic indoor-domestic dwellings

- 2.) Arsenic trioxide, mole, gopher, and pocket gopher killer use (solid formulation only) for:

Domestic outdoor-domestic dwellings
Terrestrial nonfood crops-golf courses
Ornamental plants, lawns, and noncrop areas

The following uses have been voluntarily cancelled:

- 1.) Lead arsenate. Plant growth regulator use on grapefruit.
- 2.) Calcium arsenate. Turf fungicide use.

The sodium arsenite fungicide use on grapes and the desiccant uses of arsenic acid on okra (grown for seed) and cotton are still under special review by the Agency. After reviewing data, a final decision will be made regarding these uses.

Existing Stocks Provisions

- 1.) Existing stocks of lead arsenate for plant growth regulator use on grapefruit may continue to be sold, distributed, shipped, and used until all remaining stocks are exhausted.



**WOOD PRESERVATIVES
INORGANIC ARSENICALS, PENTACHLOROPHENOL, CREOSOTE
(NONWOOD USES ONLY)**

- 2.) Existing stocks of calcium arsenate for turf fungicide use may continue to be sold, distributed, shipped, and used until all remaining stocks are exhausted.
- 3.) The sale, distribution, shipment, and use of all other cancelled inorganic arsenical products is prohibited after August 1, 1988.

B. Pentachlorophenol

Cancelled, all products for pentachlorophenol products used in paper mills in the wet end of the paper making process. These uses were previously included among the retained registrations.

Cancelled, any of the retained registrations for pentachlorophenol uses in cooling towers, pulp paper mills, and oil wells unless the registrations are amended to comply with the following terms and conditions:

1.) HxCDD Contaminant Limitations

After February 2, 1989, each batch of pentachlorophenol manufacturing-use product or portion thereof released for shipment will contain no more than 4 parts per million (ppm) HxCDD, and the average of all batches released in any calendar month will not exceed 2 ppm HxCDD. This reduction in content must be achieved without increasing the amount of HCB beyond 75 ppm. The manufacturing-use pentachlorophenol products will not contain any 2,3,7,8-TCDD higher than 1 part per billion (ppb).

2.) End-Use Products

Registrants must include labeling provisions on all end-use products to require use of either single, treatment-sized water-soluble bags or closed-system metering devices.

**WOOD PRESERVATIVES
INORGANIC ARSENICALS, PENTACHLOROPHENOL, CREOSOTE
(NONWOOD USES ONLY)**

3.) Cautionary Statements

These labels must include the following cautionary statement:

The U.S. EPA has determined that pentachlorophenol can produce defects in the offspring of laboratory animals. Exposure to pentachlorophenol during pregnancy should be avoided.

The Agency is continuing its review of the retained nonwood uses (cooling water, paper mill, and oil well operations) of pentachlorophenol. After receiving and reviewing data, a final decision will be made.

Existing Stocks Provisions

The sale, distribution, shipment, and use of existing stocks of cancelled pentachlorophenol products was prohibited in the U.S. after February 24, 1989.

C. Creosote

All nonwood creosote and coal tar products have been cancelled, excluding those products for use on gypsy moth egg masses.

Existing Stocks Provisions

The sale, distribution, shipment, and use of existing stocks of cancelled creosote products are prohibited in the U.S. Disposal of creosote products must be in accordance with the Resource Conservation and Recovery Act.

Reference

50 FR 41943 October 16, 1985; 53 FR 5524 February 24, 1988; 53 FR 24787 June 30, 1988.